pISSN 2288-3649 · eISSN 2288-3657 www.icpiournal.org

# REVIEW

# Spiritual Therapy in Coping with Cancer as a **Complementary Medical Preventive Practice**

Abolfazl Movafagh<sup>1</sup>, Mohammad Hassan Heidari<sup>2</sup>, Morteza Abdoljabbari<sup>3</sup>, Neda Mansouri<sup>1</sup>, Afsoon Taghavi<sup>4</sup>, Aliasghar Karamatinia<sup>4</sup>, Narjes Mehrvar<sup>4</sup>, Mehrdad Hashemi<sup>5</sup>, Mona Ghazi<sup>6</sup>

<sup>1</sup>Department of Medical Genetics, Cancer Research Center, Shohada Referral Hospital, School of Medicine, Shahid Beheshti University of Medical Sciences, <sup>2</sup>Department of Medical Anatomy, Shahid Beheshti University of Medical Sciences, <sup>3</sup>Department of Moaref, Shahid Beheshti University of Medical Sciences, <sup>4</sup>Cancer Research Center, Shahid Beheshti University of Medical Sciences, <sup>5</sup>Department of Molecular Genetics, Tehran Medical Sciences Branch, Islamic Azad University, <sup>6</sup>Department of Microbiology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran,

There are many of methods of treating cancer. However, the concept of curing the cancer is beyond our current knowledge. Some patients who have the cancer may seek an alternative manner of curing their disease. Alternative medicines, such as spiritual and complementary therapy, are able to cure the cancer and, at the least, are safe. Research on the importance of spirituality in cancer care has mainly been performed in geographically heterogeneous populations. The results are limited to these specific religious-cultural contexts and enlightened by contributions from ethnicity and religion. This article focused on the religiousness and spiritual support of cancer patients from diverse and heterogeneous groups around the globe. An electronic search of peer-reviewed articles was systematically performed to obtain the relevant literature with the CINAHL, PsycINFO, and PubMed databases. The keywords included religion, cancer, illness, psychotherapy, and spiritual and alternative treatment/therapies. The inclusion criteria for the reviews were that the documents were original quantitative research and published in English. Articles that were not directly relevant to the present objective were excluded. The present outcome of these review resources suggest that it may be helpful for clinicians to address spirituality, particularly with regard to prevention, healing, and survival of cancer patients. This article indicates that it may be useful for clinical oncologists to be informed of the prevalence of the use of spiritual medicine in their specialized field. In addition, patients should routinely be asked about the use of spiritual medicine as part of every cancer patient's evaluation.

(J Cancer Prev 2017;22:82-88)

**Key Words:** Cancer, Spiritual therapy, Health care, Communities

#### INTRODUCTION

A significant relation between spirituality and better health care has been studied in a number of normal and illness populations. Additionally, religion and spiritual therapy together are regularly used by cancer and non-cancer patients who cope with diagnosis and treatment. Spiritism was introduced by Hippolyte Léon Denizard Rivail, who was also known as his

pseudonym, Allan Kardec. Based on the latest Brazilian Demographic Census, 2 "Spiritism" is the third largest religion and has approximately 2.3 million followers in Brazil. Its Brazilian followers belong to well-off populations with high level education (60% have at least 11 years of education). According to a data review article,<sup>3</sup> there are more than 1,650 religious places and numerous Spiritist clinics in all parts of Brazil. As reported in the literature,<sup>3</sup> spiritism is present in more than 31 countries

Received April 27, 2017, Revised June 3, 2017, Accepted June 8, 2017

#### Correspondence to: Abolfazl Movafagh

Department of Medical Genetics, Cancer Research Center, Shohada Referral Hospital, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran. Iran

Tel: +98-21-2240067, E-mail: movafagh.a@sbmu.ac.ir

\*This research study is part of Neda Mansouri MSc thesis work.

Copyright © 2017 Korean Society of Cancer Prevention

@This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (http://creativecommons.org/licenses/by-nc/4.0) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

including Latin America, and the process of these therapies is simple and cost-effective.

## QUALITY OF LIFE AND SPIRITUALITY

Brady et al.<sup>4</sup> reported the relationships between spiritual well-being and quality of life (QOL) in a large number of Australian cancer patients. In particular, spiritual well-being was closely associated with general QOL and subscales that comprise QOL, including physical, social/family, emotional, and functional well-being. Moreover, the relationship between spiritual well-being and QOL was shown to be informative for chronic illness therapy.<sup>5</sup> These findings support the conclusion of a meta-analysis including 51 previous studies.<sup>6</sup> In a large set of data from the USA involving 1,617 subjects, it was shown that spiritual therapy is psychometrically demonstrable by measuring the spiritual well-being of patients with cancer and other chronic diseases.<sup>7</sup>

The performance of life is a matter of great interest for scientists in the field of malignant and spiritual health care. The average score of global health status/QOL was 41.4 in the current peer-reviewed literature, indicating that the general population has poor QOL compared to the populations in Germany (65.5), the UK (66.8), Korea (66.5), and Kuwait (48.3). 8-11 Furthermore, the average score (41.4) for QOL indicates that patients had poor to average functioning and moderate symptom experience in their clinical history. The mean score for spirituality on the Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being (FACIT-Sp) was 28.4 in Iranian women with breast cancer, which is lower than 38.5 in English-speaking patients<sup>12</sup> and 32.4 in South American patients with cancer. 13 Breitbart 14 reported that being a Muslim in the "faith" component of spirituality is closely associated with Muslims' spiritual and religious belief. Jafari et al. 15 suggested that the Islamic faith and beliefs in research participants were linked with their spiritual well-being. 16 On the other hand, Albers et al. 17 reported that the participants revealed a lower level of meaning and peace information in their hospital record.

# THE CONTEXT OF MIDDLE EASTERN SPIRITUAL THERAPY

In spirituality-based interventions in different cultures, Iranian Muslim patients have a lower level of spiritual well-being, particularly in the meaning and peace subscales of the FACIT-Sp. <sup>15,18</sup> This significant point stresses the need to inves-

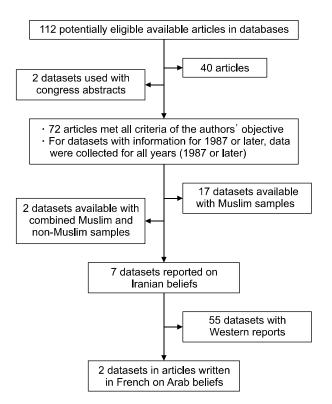
tigate the effects of spirituality-based interventions in the Persian context. Fallah et al. 19 examined the effect of a spiritual group intervention on the increase of hope, life satisfaction, and happiness and found that this intervention was beneficiary for increasing the mental strength in female Iranian breast cancer survivors. However, the results of spiritual therapy in terms of spiritual well-being and its relation with QOL are not well-documented. Qualitative studies from Iranian Muslim cancer patients showed that the spiritual approach is the major coping strategy by which they respond to cancer, considering that spirituality is a source of hope and peace, as reported by some independent results from Iran. 20-23 The faith concept of spirituality is connected with spiritual and religious belief, whereas the meaning component of spirituality may be a more universal component.<sup>24</sup> This study provides evidence of the effectiveness of spiritual therapy in terms of the meaning and peace subscales of spiritual well-being in an Iranian context. Similar results from a Muslim setting, such as Saudi Arabia, showed that the majority of cancer patients believe that their prognosis lies in the hands of God and that the fate of the patients is beyond the control of the responsible treating physicians.<sup>25</sup>

In addition, education and knowledge about specialist palliative care and hospice care must be improved among health and social care professionals and patients, and standardized referral criteria must be developed. Further work is also necessary to assess the needs of those not currently accessing palliative care therapies. In one report, 695 participants (136 cancer patients, 161 informal careers, and 398 health care professionals) were recruited from oncology centers in four major regions of Saudi Arabia.<sup>26</sup> The results of a large set of data on the psycho-social and religious impact of cancer diagnoses are reported by three independent research workers from Morocco. 27-29 A qualitative study demonstrated that Malaysian Muslim women with advanced breast cancer look to their Islamic beliefs for peace and strength to deal with the illness.<sup>30</sup> The aim of this study was to review the religiousness and spiritual support of cancer patients from different community groups.

# FLOWCHART SEARCH ON HETEROGENOUS COMMUNITIES

Based on the purpose of the included studies, we review the studies in terms of definitions of spirituality and religion, descriptions of the spiritual and religious main points in the studies, and patients in the group therapies. The search yielded a total of 112 articles in the current literature for the present review

article. After removing double entries, 40 peer-reviewed papers were excluded for not assessing the topic analyzed or investigating the association between spiritual therapy and health outcomes. Consequently, 72 articles remain in this review, and datasets were collected with information from the 1987 to 2015. Seven items of information were available in regard to Muslim communities and spiritual therapy. The two studies available combined and supported spiritual therapy for cancer patients among Muslim and non-Muslim communities. Seven datasets reported on Iranian research beliefs for patients suffering from different types of cancers, with high-quality information on methods, measures, analysis, findings, and the value of the research. The full text of the two articles on Muslim beliefs was reported in French, with the abstract being in English in this concise manuscript. In all but two review articles, information including the purpose of the present review was provided on the basis of an international congress abstract. The scientific basis for each spiritual therapy affecting different cancer diagnosis outcomes is outlined in Figure 1.



**Figure 1.** The data of the flowchart steps of the total information related to this article.

# INTERNATIONAL PROSPECTIVE OF SPIRITUAL THERAPY

Study on spirituality in a health care context, based on cultural background, has mainly been performed in the USA. The results are restricted to this specific religious-cultural context and enlightened by contributions from other ethnicities and religious communities.<sup>30</sup> In addition, the cultural background and heterogeneity play a critical role in the manner in which people make meaning of suffering and illness, and spiritual beliefs may empower cancer patients to endure the therapeutic process. In the Western literature, the definition of spirituality has been derived.31 Some researchers use spirituality and religiosity interchangeably,<sup>32</sup> whereas others prefer to differentiate between the two.33 Iranian scientists have observed that the different elements of spirituality affect the health status of patients, including contemplation, prayer, friendship, services, and hope as context issues in spirituality, gratitude, trust, and repentance. Any spiritual element or all of them as an integrated package are currently used for promoting the health status of patients with cancer and/or particular diseases.<sup>34</sup> Religion is recognized as an organized community of faith with specific rules of behavior, and spirituality is considered the personal and subjective experience of something that is greater than oneself. It concerns how people make meaning, and are aware of honoring the sacred in our lives.33

Another review in an Islamic context reported that no distinction between religion and spirituality is attributed to the lack of separation between thoughts and action.<sup>34</sup> In the Islamic perspective, religion is the broader construct, encompassing a way of life. Religion is expressed in prescribed religious activities and provides the roadmap to one's final purpose in life, that is, to live continuously in a relationship with God. Thus, the separation between religion and spirituality is not possible in the Islamic way of life because they make a person spiritual but without religion or a roadmap to reach God, 35 Similarly, to be religious but not spiritual may make one religious, but without self-understanding and consciousness, one is considered spiritually dead. Therefore, religion and spirituality in Islam are combined into a unitary way of life.<sup>30</sup> Another factor that differentiate between Islamic spirituality and post-modern Western spirituality is its source. Islamic spirituality is based on the words of God in the Qur'an (Muslims' Holy Book), not human speculation. Therefore, Muslims' spiritual life must be developed on the basis of acts of belief and living the religion, as ordained in the Qur'an.<sup>30</sup> Regarding spirituality and coping for Muslim patients, it can be important to die with loved ones present, in a heightened state of awareness of Allah,  $^{36}$  and handling illness may well be a matter of not only returning to physical or mental health but also journeying toward enlightenment.  $^{37}$ 

The global population of Muslims is presently estimated at 1.6 billion, a 23.4% share of the world population, and is expected to grow to 6.1 billion (26.4%) by the year 2030.<sup>38</sup> Notwithstanding these large numbers, there are scarce studies on the role of spiritual well-being in health-related QOL among Muslims.<sup>39</sup> According to data from the Ministry of Health and Medical Education in Iran, over 30,000 Muslim in Iran die of cancer every year, with an incidence of approximately 70,000 new cases. The incidence of cancer in many developing countries is increasing.<sup>40</sup> These data do not include other chronic diseases which warrant palliative care and impose an enormous burden on patients, families, and health care systems.

Palliative care was first introduced to Islamic Middle Eastern countries in the early 1990s. 41 Muslim Middle Eastern societies have different cultural and religious aspects that are not considered in Western models.<sup>42</sup> Many Muslim patients have trust and faith in God's will and do not perceive illness as a punishment but, rather, as a way to atone for sins. Due to the increasing incidence of people in need of palliative care in developing countries and given that Muslims predominantly live in developing countries, they are very dependent on spirituality, describing the ways in which spiritual care is provided in the Islamic context is highly demanded. Additionally, to reduce this incidence, complementary and alternative medicine (CAM), such as spiritual therapy and religion must be considered. In Malaysia, some Malay Muslim female patients are refusing or discontinuing treatment as they tend to turn to spirituality as a means of fighting their breast cancer.<sup>30</sup>

Islam has a profound concept concerning death and the afterlife. The belief in life after death and resurrection is one of the three main principles of Islam, in addition to the belief in God (Unity of Allah) and his last messenger (Prophecy). Many verses of the holy Quran mention the world after death. Mosques or holy place for praying had a main role in the beginning of Islam. They were places to treat those who were wounded in battles, to pray, to teach, to gather, or to learn Islamic law. Muslim scholars also play pivotal roles in the everyday life of their Muslim followers, particularly in difficult circumstances, such as death. Moreover, the Minority Ethnic Health Inclusion Project has contacted the Edinburgh Central Mosque about the possibility of starting some health education programs including information on cancer and illness. 44.45 Referring to clergymen is also usual in other religions.

such as Christianity and Judaism. Americans who lose someone close are almost five times more likely to pray and to seek help from a clergyman than in any other mental condition. <sup>46</sup> Baptists were most likely to pray about symptoms discussed with a physician or which drugs are to be taken than to pray about other issues. <sup>47</sup> The majority of physicians believe that religion and praying have a positive effect on the mental health of older patients, and many believe that religion has a positive effect on physical health. <sup>48</sup>

# COMPLEMENTARY AND ALTERNATIVE MEDICINE

CAM is garnering increasing interest and acceptance with regard to cancer-infected illness. The association of spirituality and CAM in oncology is unfolding as a research theme that may have practical implications in supportive care.<sup>49</sup> Religion and spirituality are resources that are regularly used by patients with cancer coping with diagnosis and treatment. Additionally, detailed information has been evaluated, showing that a large range of complementary/ alternative medicine types were used by females with breast cancer. Of the 49 selected studies, 24 studies reported that biologically based practices (such as foods, herbs, and vitamins) were the most common types of CAM, and 9 studies reported that mental-body medicine (prayer and mind healing meditation) was the most frequent type of CAM experienced by women with breast cancer. Physicians and nurses are rarely reported to be sources of information about CAM. 50-53 Bredle et al. 54 found that cancer patients with a higher degree of meaning/peace in their lives were able to tolerate severe physical symptoms and enjoy their lives. Some studies documented complete medical systems (naturopathic medicine, traditional Chinese medicine, and homeopathic medicine) as the type of CAM most frequently applied to women with breast carcinoma. 55,56 Moreover, another study reported energy medicine (therapeutic touch, Qi gong, and Reiki) as the type of CAM for women with advanced-stage breast cancer.<sup>57</sup>

The past decade has seen a growth of research examining the relation between spirituality, religion, and health. Studies have examined this relationship in heterogeneous community samples, <sup>58-61</sup> among medical and surgical patients, <sup>62-63</sup> and among common cancer patients. <sup>64-66</sup> For some people, spirituality and religion are the main point of their lives, whereas for others, spirituality and religion seem to play a minor role in their psychological well-being. <sup>67</sup> On the other hand, some reports show that non-religious groups appeared no different in their

levels of meaning/peace compared with Christian patients, raising questions regarding the true relationship between religion and health.  $^{68}$ 

The available empirical research used in the current review of the peer-reviewed literature included only articles published in English, and more than 50% of the studies were conducted in the United States of America. Consequently, additional research with heterogeneous ethnic groups and languages in other parts of the world would provide additional information about the use of CAM by cancer patients. 69 Hence, we found relevant articles in this regard. The Persian version of the FACIT-Sp scale is an important and valid tool for the clinical assessment of, and research into, the spiritual well-being of Muslim Iranian and Farsi-speaking (Iran, Afghanistan, and Tajikistan) patients in other regions of the world who are coping with cancer. This result was also observed in another validation study among Iranian patients, 70.71 a Jordanian population, 16 a sample from Saudi Arabia, 25 a sample from Morocco 27-29 and among Japanese patients.<sup>72</sup> This indicates that cultural issues should be considered when applying a standard questionnaire in a heterogenous population context. The FACIT-Sp has been translated into Arabic, Chinese (simplified and traditional), Italian, Japanese, Korean, Norwegian, Danish, Dutch, French, German, Portuguese, Spanish, Swedish, and Indian. 18,73 However, McClain et al. 74 reported that the relation between spirituality and psychological well-being could differ between patients with different ethnic, national, or religious backgrounds. Given that the bulk of the literature comes from Western countries, little is known about the use of CAM in cancer patients, and what is known is specific to rural areas of China.<sup>75</sup>

### **CONCLUSIONS**

Further research to elaborate these findings in other settings, with different populations, will help clarify these important issues. Additionally, the results of this concise review paper suggest that it may be helpful for clinical oncologists to be aware of the prevalence of the use of spirituality in their individual practice. Patients should routinely be asked about the use of spiritual medicine as part of every cancer patient's evaluation.

#### CONFLICTS OF INTEREST

No potential conflicts of interest were disclosed.

#### **REFERENCES**

- Fernandes PCC. Origens do espiritismo no Brasil: diálogo, razão e resistência no início de experiência (1850-1914). Sociedade e Estado 2008;23:785-812.
- Pierucci A. "Bye bye, Brasil": o declínio das religiões tradicionais no Censo 2000. Estudos Avançados 2004;18:17-28.
- Bragdon E. Spiritist healing centers in Brazil. Sem Integr Med 2005;3:67-74.
- Brady MJ, Peterman AH, Fitchett G, Mo M, Cella D. A case for including spirituality in quality of life measurement in oncology. Psychooncology 1999;8:417-28.
- 5. Cella DF. Quality of life: the concept. J Palliat Care 1992;8:8-13.
- Sawatzky R, Ratner PA, Chiu L. A meta-analysis of the relationship between spirituality and quality of life. Soc Indic Res 2005; 72:153-88.
- Peterman AH, Fitchett G, Brady MJ, Hernandez L, Cella D. Measuring spiritual well-being in people with cancer: the functional assessment of chronic illness therapy–Spiritual Well-being Scale (FACIT-Sp). Ann Behav Med 2002;24:49-58.
- Alawadi SA, Ohaeri JU. Health-related quality of life of Kuwaiti women with breast cancer: a comparative study using the EORTC Quality of Life Questionnaire. BMC Cancer 2009;9:222.
- Ahn SH, Park BW, Noh DY, Nam SJ, Lee ES, Lee MK, et al. Health-related quality of life in disease-free survivors of breast cancer with the general population. Ann Oncol 2007;18:173-82.
- Pritzkuleit R, Waldmann A, Raspe H, Katalinic A. The population-based oncological health care study OVIS: recruitment of the patients and analysis of the non-participants. BMC Cancer 2008;8:311.
- 11. Hopwood P, Haviland J, Mills J, Sumo G, M Bliss J; START Trial Management Group. The impact of age and clinical factors on quality of life in early breast cancer: an analysis of 2208 women recruited to the UK START Trial (Standardisation of Breast Radiotherapy Trial). Breast 2007;16:241-51.
- Movafagh A, Maleki F, Mohammadzadeh SG, Fadaei S. Association of glutathion S-transferase and chromosomal aberrations as a means to determine occupational exposure. Inte Congr Ser 2005;1276:197-8.
- Dapueto JJ, Servente L, Francolino C, Hahn EA. Determinants of quality of life in patients with cancer. Cancer 2005;103:1072-81.
- Breitbart W. Spirituality and meaning in supportive care: spirituality- and meaning-centered group psychotherapy interventions in advanced cancer. Support Care Cancer 2002;10:272-80.
- Jafari N, Farajzadegan Z, Zamani A, Bahrami F, Emami H, Loghmani A. Spiritual well-being and quality of life in Iranian women with breast cancer undergoing radiation therapy. Support Care Cancer 2013;21:1219-25.
- Lazenby M, Khatib J, Al-Khair F, Neamat M. Psychometric properties of the Functional Assessment of Chronic Illness Therapy-Spiritual Well-being (FACIT-Sp) in an Arabic-speaking, predominantly Muslim population. Psychooncology 2013;22:220-7.
- 17. Albers G, Echteld MA, de Vet HC, Onwuteaka-Philipsen BD, van der Linden MH, Deliens L. Content and spiritual items of quality-of-life instruments appropriate for use in palliative care: a review. J Pain Symptom Manage 2010:40:290-300.
- 18. Bai M, Lazenby M, Jeon S, Dixon J, McCorkle R. Exploring the relationship between spiritual well-being and quality of life among

- patients newly diagnosed with advanced cancer. Palliat Support Care 2015;13:927-35.
- Fallah R, Golzari M, Dastani M, Akbari ME. Integrating spirituality into a group psychotherapy program for women surviving from breast cancer. Iran J Cancer Prev 2011;4:141-7.
- 20. Taleghani F, Yekta ZP, Nasrabadi AN. Coping with breast cancer in newly diagnosed Iranian women. J Adv Nurs 2006;54:265-72.
- Jafari N, Farajzadegan Z, Zamani A, Bahrami F, Emami H, Loghmani A, et al. Spiritual therapy to improve the spiritual well-being of Iranian women with breast cancer: a randomized controlled trial. Evid Based Complement Alternat Med 2013. doi: 10.1155/2013/353262.
- Karimollahi M, Rostamnejad M, Abedi HA. P02-241 Spiritual needs of Iranian cancer patients. Eur Psychiatry 2009;24 Suppl 1:S931.
- Rahnama M, Khoshknab MF, Maddah SS, Ahmadi F. Iranian cancer patients' perception of spirituality: a qualitative content analysis study. BMC Nurs 2012;11:19.
- Chochinov HM, Cann BJ. Interventions to enhance the spiritual aspects of dying. J Palliat Med 2005;8 Suppl 1:S103-15.
- 25. Bahakim HM. Muslim parents' perception of and attitude towards cancer. Ann Trop Paediatr 1987;7:22-6.
- Almuzaini AS, Salek MS, Nicholls PJ, Alomar BA. The attitude of health care professionals toward the availability of hospice services for cancer patients and their carers in Saudi Arabia. Palliat Med 1998;12:365-73.
- Errihani H, Mrabti H, Sbitti Y, Kaikani W, El Ghissassi I, Afqir S, et al. Psycho-social and religious impact of cancer diagnosis on Moroccan patients: experience from the National Oncology Center of Rabat. Bull Cancer 2010;97:461-8.
- Boulaamane L, Essaadi I, Lalya I, M'rabti H, Errihani H. Psychosocial impact of cancer on Moroccan adolescent and young adult: experience of National Institute of Oncology of Rabat. Bull Cancer 2011;98:981-8.
- 29. Errihani H, Mrabti H, Boutayeb S, El Ghissassi I, El Mesbahi O, Hammoudi M, et al. Impact of cancer on Moslem patients in Morocco. Psychooncology 2008;17:98-100.
- Ahmad F, Muhammad Mb, Abdullah AA. Religion and spirituality in coping with advanced breast cancer: perspectives from Malaysian Muslim women. J Relig Health 2011;50:36-45.
- Meraviglia MG. Critical analysis of spirituality and its empirical indicators. Prayer and meaning in life. J Holist Nurs 1999; 17:18-33.
- 32. Hill PC, Pargament KI, Hood RW, McCullough ME, Swyers JP, Larson DB, et al. Conceptualizing religion and spirituality: Points of commonality, points of departure. J Theory Soc Behav 2000;30:51-77.
- 33. Tisdell EJ. Exploring spirituality and culture in adult and higher education. San Francisco, Jossey-Bass, 2003.
- 34. Akbari ME. Spirituality and religion in management of cancer patients. IJCP 2011;4:1.
- Nasr SH. Science and civilization in Islam. 2nd ed. Cambridge, The Islamic Texts Society, 1987.
- Al-Ghazali M. The alchemy of happiness. London, M.E. Sharp Inc., 1991. http://www.sacred-texts.com/isl/tah/index.htm. Accessed April 25, 2017.
- 37. Al-Haddad AA. The book of assistance. London, Quilliam Press, 1989.
- 38. Pew Research Center's Forum on Religion & Public Life. The fu-

- ture of the global Muslim population: projections for 2010-2030. Washington, DC, Pew Research Center, 2011.
- Laird LD, de Marrais J, Barnes LL. Portraying Islam and Muslims in MEDLINE: a content analysis. Soc Sci Med 2007:65:2425-39.
- Asadi-Lari M, Goushegir SA, Madjd Z, Latifi NA. Spiritual care at the end of life in the Islamic context, a systematic review. IJCP 2008;2:63-7.
- 41. Al-Shahri M. The future of palliative care in the Islamic world. West J Med 2002;176:60-1.
- 42. Sachedina A. End-of-life: the Islamic view. Lancet 2005;366:774-9.
- 43. Sarhill N, LeGrand S, Islambouli R, Davis MP, Walsh D. The terminally ill Muslim: death and dying from the Muslim perspective. Am J Hosp Palliat Care 2001;18:251-5.
- 44. Ghouri N. Health fair in a mosque: putting policy into practice. Public Health 2005;119:197-201.
- Esteghamati A, Gouya MM, Zahraei SM, Dadras MN, Rashidi A, Mahoney F. Progress in measles and rubella elimination in Iran. Pediatr Infect Dis J 2007;26:1137-41.
- Flannelly KJ. Weaver AJ. Smith WJ. Oppenheimer JE. A systematic review on chaplains and community-based clergy in three palliative care journals: 1990-1999. Am J Hosp Palliat Care 2003; 20:263-8.
- 47. Bearon LB, Koenig HG. Religious cognitions and use of prayer in health and illness. Gerontologist 1990;30:249-53.
- 48. Meraviglia MG. Prayer in people with cancer. Cancer Nurs 2002;25:326-31.
- Ben-Arye E, Schiff E, Vintal H, Agour O, Preis L, Steiner M. Integrating complementary medicine and supportive care: patients' perspectives toward complementary medicine and spirituality. J Altern Complement Med 2012;18:824-31.
- Henderson JW. Donatelle RJ. The relationship between cancer locus of control and complementary and alternative medicine use by women diagnosed with breast cancer. Psychooncology 2003; 12:59-67.
- Molassiotis A, Fernadez-Ortega P, Pud D, Ozden G, Scott JA, Panteli V, et al. Use of complementary and alternative medicine in cancer patients: a European survey. Ann Oncol 2005;16: 655-63.
- Owens B, Jackson M. Berndt A. Complementary therapy used by Hispanic women during treatment for breast cancer. J Holist Nurs 2009;27:167-76.
- Richardson MA, Sanders T, Palmer JL, Greisinger A, Singletary SE. Complementary/alternative medicine use in a comprehensive cancer center and the implications for oncology. J Clin Oncol 2000;18:2505-14.
- 54. Bredle JM, Salsman JM, Debb SM, Arnold BJ, Cella D. Spiritual well-being as a component of health-related quality of life: the functional assessment of chronic illness therapy-spiritual well-being scale (FACIT-Sp). Religions 2011;2:77-94.
- Crocetti E, Crotti N, Feltrin A, Ponton P, Geddes M, Buiatti E. The use of complementary therapies by breast cancer patients attending conventional treatment. Eur J Cancer 1998;34:324-8.
- Cui Y, Shu XO, Gao Y, Wen W. Ruan ZX, Jin F, et al. Use of complementary and alternative medicine by Chinese women with breast cancer. Breast Cancer Res Treat 2004;85:263-70.
- Shen J, Andersen R, Albert PS, Wenger N, Glaspy J, Cole M, et al. Use of complementary/alternative therapies by women with advanced-stage breast cancer. BMC Complement Altern Med 2002;2:8.

- 58. Hummer RA, Rogers RG, Nam CB, Ellison CG. Religious involvement and U.S. adult mortality. Demography 1999;36:273-85.
- Movafagh A, Hajifathali A, Isfahani F, Attarian H, Ghadiani M, Rezvani H, et al. Geographic heterogeneity of cytogenetic characteristics of acute myeloid leukemia in the early detection: a comparative study of iranian and indian adult patients. IJCP 2009;2:85-89.
- Strawbridge WJ, Cohen RD, Shema SJ, Kaplan GA. Frequent attendance at religious services and mortality over 28 years. Am J Public Health 1997;87:957-61.
- 61. Koenig HG, Pargament KI, Nielsen J. Religious coping and health status in medically ill hospitalized older adults. J Nerv Ment Dis 1998;186:513-21.
- Oxman TE, Freeman DH Jr, Manheimer ED. Lack of social participation or religious strength and comfort as risk factors for death after cardiac surgery in the elderly. Psychosom Med 1995;57:5-15.
- 63. Gijsberts MJ, Echteld MA, van der Steen JT, Muller MT, Otten RH, Ribbe MW, et al. Spirituality at the end of life: conceptualization of measurable aspects-a systematic review. J Palliat Med 2011; 14:852-63.
- 64. Fehring RJ, Miller JF, Shaw C. Spiritual well-being, religiosity, hope, depression, and other mood states in elderly people coping with cancer. Oncol Nurs Forum 1997;24:663-71.
- 65. Holland JC, Passik S, Kash KM, Russak SM, Gronert MK, Sison A, et al. The role of religious and spiritual beliefs in coping with malignant melanoma. Psychooncology 1999;8:14-26.
- Mickley JR, Soeken K, Belcher A. Spiritual well-being, religiousness and hope among women with breast cancer. Image J Nurs Sch 1992:24:267-72.

- Sperry L, Shafranske EP. Spiritually oriented psychotherapy. Washington, DC, American Psychological Association, 2005.
- Whitford HS, Olver IN, Peterson MJ. Spirituality as a core domain in the assessment of quality of life in oncology. Psychooncology 2008;17:1121-8.
- Wanchai A, Armer JM, Stewart BR. Complementary and alternative medicine use among women with breast cancer: a systematic review. Clin J Oncol Nurs 2010;14:E45-55.
- Ghaem H, Borhani Haghighi A, Jafari P, Nikseresht AR. Validity and reliability of the Persian version of the multiple sclerosis quality of life questionnaire. Neurol India 2007;55:369-75.
- 71. Movafagh A, Hajifathali A, Zamani M. Secondary chromosomal abnormalities of de novo acute myeloid leukemia: a first report from the Middle East. Asian Pac J Cancer Prev 2011;12:2991-4.
- Noguchi W, Ohno T, Morita S, Aihara O, Tsujii H, Shimozuma K, et al. Reliability and validity of the Functional Assessment of Chronic Illness Therapy-Spiritual (FACIT-Sp) for Japanese patients with cancer. Support Care Cancer 2004;12:240-5.
- Varma N, Varma S, Movafagh A, Garewal G. Unusual clonal cytogenetic abnormalities in aplastic anemia. Am J Hematol 1995;49:256-7.
- McClain CS, Rosenfeld B, Breitbart W. Effect of spiritual well-being on end-of-life despair in terminally-ill cancer patients. Lancet 2003;361:1603-7.
- 75. Teng L, Jin K, He K, Bian C, Chen W, Fu K, et al. Use of complementary and alternative medicine by cancer patients at Zhejiang University Teaching Hospital Zhuji Hospital, China. Afr J Tradit Complement Altern Med 2010;7:322-30.